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ORIGINAL METHOD OF STAINING AND MOUNTING POLLENS.

By Rev. J. T. Brownell, A. M., Auburn, N. Y.

1. *Materials used.*—Canada balsam, spirits turpentine, alcohol, analine colors dissolved in alcohol.

2. *Operation.*—Place a blank slide on the turn-table; apply a small drop of the staining fluid to the center of the slide and place in it the requisite amount of pollen, and spread it evenly on the glass by placing the sharp point of a teaser in the center of the mass and drawing it gently to one side while the slide is rapidly revolving; washing away the superfluous stain by dropping clean alcohol on the mass of pollen, using for this purpose a sharp pointed teaser; wipe away the out-flowing fluid by the use of a small piece of clean cloth rolled up neatly and applied to the outer edge of the waste fluid, gradually moving it inward, as the slide revolves, until only a small circle is left covered with pollen; allow a few moments for the alcohol to thoroughly evaporate from this; then apply a minute drop of spirits of turpentine, so that the balsam may permeate the mass without inclosing air bubbles; next apply the balsam, *dropping it in a ring around the pollen*, and moving it up to the center by placing the edge of a small chisel, held upright, to the surface of the slide, and at an angle such as to gather it, the balsam, together as the slide revolves; now lay on the cover-glass and settle it well to place, applying pressure (with a tremulous motion of the hand) sufficient to bring all the pollen grains to a common plane, but yet so as to avoid crushing them; remove the superfluous balsam, using the small chisel as before, only setting it so as to throw the balsam away from the cover into an outer ring—which operation serves also to accurately center the cover-glass; and, lastly, using a wider chisel, take up this ring of balsam; and the slide, furnished with a temporary label, is laid away to cure.

3. *Practical suggestions.*

1st—To secure pollen perfectly clean, the blossoms should be plucked just before the unfolding of the flower, placed in a suitable vase with water, and left to expand under bell-glass cover.

2d—To preserve pollen for future use, tease it out into a watch-glass and leave it for some days, under cover; then store it in small vials properly labeled. Some pollens, however, as the Malvaceæ, will not keep in this way; preserve such in alcohol, taking care to provide the vials with rubber stoppers to prevent evaporation.

3d—To avoid *mixing* pollens: Have all the implements in use clean to begin with; work at but one kind of pollen at a sitting; have no draft of air across the table while at work; when through with the job on hand thoroughly wipe the utensils, including the turn-table and work-table; then wash the hands and brush the clothes *outside the room.*

4th—The *teasers* used in the staining process are readily made of common sewing needles, large size, and set in the cork of the vial so as to reach a half-inch, or more, into the fluid; the point should be broken off and then ground smooth so that the fluid may be applied to the slide by a mere touch of the end of the teaser.

5th—*Chisels* for the uses named, and far superior to anything found in the market. any one can readily make for his own use. For the narrow chisel set a *crooked awl*, large size, in a suitable handle; break off about one-half the length of the curve and grind the face of the chisel on the convex side with the *bevel* on the other; cost one cent. For the wider chisel take a piece of *clock-spring* four inches long and three-eighths of an inch wide; straighten it nicely and set it in a handle, then grind to chisel edge and keep *sharp*. For this your jeweler will probably charge nothing; that is, for the piece of spring.

6th—All utensils should be furnished with handles, made of any handy light wood (the lighter the better) and so constructed that when laid down they will neither roll about nor tip so as to allow the points to touch the table.

7th—All that has been said above applies equally to the mounting of *smuts*, save that these, being dark in color, do not need to be *stained*, which is also true of *many pollens.*